ACM/IEEE ICCPS 2018 CALL FOR PAPERS

The 9th ACM/IEEE International Conference on Cyber-Physical Systems
April 11-13, 2018 in Porto, Portugal, part of CPSWeek 2018
http://iccps.acm.org/2018

Overview: As digital computing and communication become faster, cheaper, and available in packages that are smaller and use less power, these capabilities are increasingly embedded in many objects and structures in the physical environment. Cyber-physical systems (CPS) are physical and engineered systems whose operations are monitored, coordinated, controlled, and integrated by computing and communication. Broad CPS deployment is transforming how we interact with the physical world as profoundly as the world wide web transformed how we interact with one another, and further harnessing their capabilities holds the possibility of enormous societal and economic impact. ACM/IEEE ICCPS is the premier single-track conference for reporting advances in all CPS aspects, including theory, tools, applications, systems, test-beds and field deployments.

ICCPS 2018 will, for the first time, have two tracks: **Theory** and **Applications**. Authors will be required to select a track (see description below) when submitting papers. Please note that the program co-chairs may move a paper to a more appropriate track based on their judgment and suggestions from the program committee. Each track will have its own program committee. The **theory track** focuses on the core science to develop fundamental principles that underpin the integration of cyber and physical elements. The **applications track** focuses on the development of technologies, tools, and architectures for building CPS systems, and on the design, implementation, and investigation of CPS applications. Application domains for both tracks include (but are not limited to): transportation, energy, water, agriculture, ecology, supply-chains, medical and assistive technology, sensor and social networks, and robotics. Among the relevant research areas are security, control, optimization, machine learning, game theory, mechanism design, mobile and cloud computing, model-based design, verification, data mining / analytics, signal processing, and human-in-the-loop shared or supervisory control. Papers on secure and resilient CPS infrastructure (the focus of the former HiCoNS conference) can either be submitted to the theory or to the applications track depending on the emphasis of the paper.

Submissions: All submissions must be in English. Only original papers that are not submitted or published in other conferences or journals will be considered. Manuscripts should have a main body with no more than 10 pages. Up to 2 additional pages of appendices may follow the main body of the paper, within the same submitted .pdf file. The paper must be in the same format as that in the final published proceedings. It shall use the IEEE two-column conference style, US Letter (8.5 inch x 11 inch) paper size, and 10pt text font size.

Important Dates:
Full paper submission deadline: October 6, 2017, 23:59 UTC-12:00 (firm, see CPSWeek deadline policy);
Author notification: December 18, 2017;
Camera-ready papers due: February 21, 2018.

General Co-Chairs:
Chris Gill, Washington University in St. Louis, USA;
Bruno Sinopoli, Carnegie Mellon University, USA.

Program Co-Chairs:
Xue Liu, McGill University, Canada;
Paulo Tabuada, UCLA, USA.

Steering Committee:
Insup Lee, University of Pennsylvania, USA;
Jack Stankovic, University of Virginia, USA;
Eric M. Feron, Georgia Institute of Technology, USA;

Karl H. Johansson, Royal Institute of Technology (KTH), Sweden;
Sonia Martinez (Ex Officio), UC San Diego, USA;
Eduardo Tovar (Ex Officio), CISTER/INESC-TEC, Polytechnic Institute of Porto, Portugal.